

## THE BOTIINE LOACHES (OSTEICHTHYES : COBITIDAE) OF THE LANCANGJIANG (UPPER MEKONG) WITH DESCRIPTION OF A NEW SPECIES

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**Abstract.** — Three species of the loach genus *Botia* are known from the Lancangjiang drainage (the Chinese part of Mekong): *B. beauforti* Smith, 1931, *B. superciliaris* Günther, 1892 and *B. nigrolineata*, new species, which is distinguished by its unique colour pattern consisting of a black longitudinal stripe along body axis and a black stripe along dorsal midline. *Botia superciliaris* is reported for the first time from the Mekong drainage. In appendix, *B. rostrata* Günther, 1868 is reported for the first time from both China and the drainages of Irrawaddy and Salween.

The subfamily Botiinae includes about 40 species in the genera *Botia* Gray, 1832 (characterized by the absence of cheek scales), *Parabotia* Sauvage & Dabry, 1874 (with scaled cheeks and bifid suborbital spine) and *Leptobotia* Bleeker, 1870 (with simple suborbital spine). Botiinae are benthic fishes of small to middle size (up to about 400 mm SL) which usually inhabits slow to moderately swift waters over rocky bottom.

According to the latest revision (Chen, 1980), *Botia* is divided into three subgenera: *Botia* s. s. which has four pairs of barbels (two maxillary, one mandibular and a pair of well developed pointed mental lobes on lower lips), with about 8 species occurring south of the Himalayas from the Indus to the Salween drainages; *Hymenophysa* M' Clelland, 1839 which has a fontanelle on top of skull and three pairs of barbels (two maxillary and one mandibular) and rounded mental lobes not developed as barbels, with about 13 species occurring from the Irrawaddy to the Mekong drainages and to Sumatra and Borneo; and *Sinibotia* Fang, 1936 which has no fontanelle and three pairs of barbels, with 3 species in the Upper Mekong and Upper Yangtze drainages.

A recent examination of the specimens of botiine fishes in the collection of

Kunming Institute of Zoology, Academia Sinica (KIZ) showed that three species of *Botia* are present in the Mekong drainage of China, that one had not been reported before and that one is new.

*Botia (Sinibotia) superciliaris* Günther, 1892

*Botia superciliaris* Günther, 1892:250

*Botia (Sinibotia) superciliaris*: Fang, 1936:20 — Chen, 1980: 8

The examined specimens agree well with descriptions given by Günther (1892), Fang (1936) and Chen (1980). This is the first record of this species from the Mekong drainage.

**Material** : KIZ 748661—8, 8 ex., 84.1—107.2 mm SL; Yunnan, Weixi County (about 27°15' N 99°00'E).

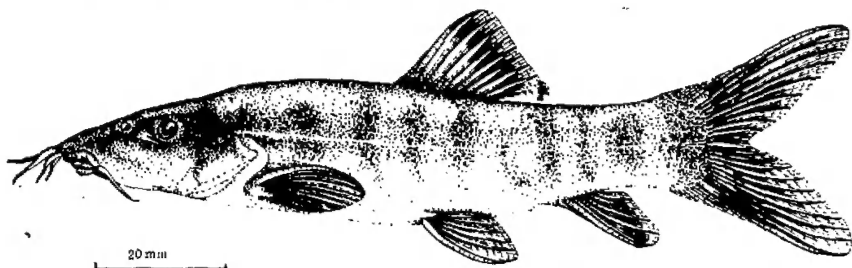


Fig. 1. *Botia superciliaris* Günther, KIZ 748663, 96 mm SL

*Botia (Hymenophysa) beauforti* Smith, 1931

*Botia beauforti* Smith, 1931: 2, fig. 1. — Taki, 1972: 65; 1974:166, fig. 158. — Kottelat, 1985:267.

*Botia hymenophysa* (non Bleeker, 1852) Fowler, 1934:101, fig. 52 only.

*Botia lucas-bahi* Fowler, 1937:154, fig. 70; 1939, 59, figs. 7—9.

*Botia beauforti formosa* Pellegrin & Fang, 1940:119, fig. 5.

*Botia (Hymenophysa) lucasbahi*: Li, 1976: 118; Chen, 1980: 5.

? *Botia (Hymenophysa) yunnanensis* Chen, 1980:6, fig.1.

This species is probably the one reported as *B. lucasbahi* Fowler, 1937 by Li (1976) and Chen (1980). *Botia lucasbahi* is a synonym of the present species according to Taki (1972). The colour pattern of *B. beauforti* shows a great range of variation; in some specimens, like the one illustrated by Smith (1931, 1945), the bars are absent while in others the spots and horizontal lines are only very faint (as in the material reported hereunder); these variations may be due to age(?) and state of conservation. A "complete" colour pattern is illustrated by Fowler (1939, as *B. lucasbahi*).

We have not had the possibility to examine the holotype and only known specimen of *B. yunnanensis* Chen, 1980; this might possibly be one more

synonym of *B. beauforti*.

**Material:** KIZ 736074, 1 ex., 114.5 mm SL; Yunnan, Menghan (about 21°50'N 100°23'E) — KIZ uncat., 1 ex., 84.1 mm SL; no data.

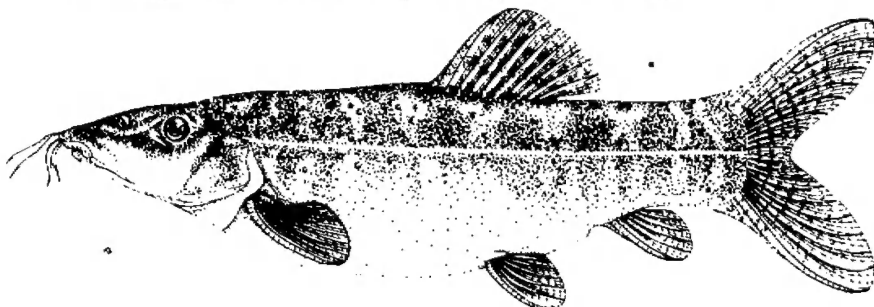


Fig. 2. *Botia beauforti* Smith, KIZ 736074, 114.5 mm SL

*Botia (Hymenophysa) nigrolineata*, new species

**Holotype:** KIZ 735198, 34.6 mm SL; Yunnan, Xishuangbanna, Menghan (about 21°50'N 100°23'E), May 1973.

**Paratype:** KIZ uncat., 36.3 mm SL; adult female with developed eggs in ovary, same locality; no date.

**Diagnosis:** *Botia nigrolineata* is easily distinguished from any other species of Botiinae by its distinctive colour pattern consisting of a black stripe from snout to mid-height of caudal fin base along course of lateral line and one from tip of snout to caudal fin base along dorsal profile on a yellowish background.

**Description:** Data of the holotype are given first, followed by those of the paratype in brackets, if different. Morphometric data: total length 125.7 (127.5)% SL, lateral head length 25.1 (27.8)% SL, dorsal head length 24.6 (25.6)% SL, 97.7 (92.1)% HL, length 52.3% SL, predorsal prepelvic length 53.5 (55.1)% SL, pre-anus length 72.3 (72.2)% SL, preanal length 78.0 (78.5)% SL, length of caudal peduncle 13.9 (14.3)% SL, 66.7 (51.5)% HL, depth of caudal peduncle 15.6 (15.2)% SL, 62.1 (54.5)% HL, head depth 15.9 (16.3)% SL, 63.2 (58.4)% HL, body depth 23.4 (23.1)% SL, 93.1 (83.2)% HL, snout length 10.7 (12.1)% SL, 42.5 (43.6)% HL, eye diameter 5.2 (5.5)% SL, 20.7 (19.8)% HL, interorbital width 8.7 (9.1)% SL, 34.5 (32.7)% HL, body width 14.7 (16.8)% SL, 58.6 (60.4)% HL. D 4/8; A 3/5 1/2; P 13; V 8; C 1/9 + 8/1. About 60 (65) pores along lateral line.

A small species of *Botia* with elongated body. Dorsal profile of head and body in front of dorsal fin origin convex, slightly concave behind dorsal fin, but body depth not considerably greater than depth of caudal peduncle. Dist-

ance from dorsal fin origin to tip of snout equal to distance to base of caudal fin. Superior edge of dorsal fin straight. Pectoral fins reach a little beyond midway to pelvic fin bases. Pelvic fins inserted under third branched dorsal ray, they nearly reach anus which is situated about one eye diameter in front of anal fin. Axillary pelvic and pectoral lobes are present.

Eye situated at midlength of head, snout length equal to postorbital length. Suborbital spine bifid, the large point about 3 times longer than the small one, tip of large point situated about below posterior margin of pupilla (in holotype). Six barbels (4 rostral and 2 maxillary), all of about the same length and slightly greater than eye diameter. Both lips smooth to very finely pleated. Lower lip with a median notch and, on each side, a deep transversal furrow separating a small patch, itself split by a perpendicular furrow forming posteriorly a nearly spherical knob (the anterior part being the normal continuation of the lip and being pleated or not) (Fig. 3B). Digestive duct straight. A small fontanelle is present posteriorly between frontals, parietals and supraoccipital.

**Colour pattern** (in formalin): A dark brown stripe from tip of snout to caudal fin base along dorsal profiles, its width is about  $1\frac{1}{2}$ –2 eye diameter at its widest point in front of dorsal fin. A second stripe runs from tip of snout to mid-height of caudal fin base through eye and along lateral line. In front of eyes, its width is about equal to eye diameter; between eye and branchial opening, it is only faintly marked; on the sides, its width is equal to  $1-1\frac{1}{2}$  eye diameter. At its posterior extremity it is superimposed over a much fainter brown spot along caudal fin base. Fins hyalin except for very faint brown marks on basal two thirds of upper- and lowermost caudal fin rays.

**Habitat:** Small creek with sandy bottom and moderate current.

**Discussion:** *Botia nigrolineata* is easily distinguished from any other species of botiine fishes by its colour pattern: it is the only species to have a mid-dorsal and mid-lateral stripes in adult. The only other species sharing parts of this colour pattern is *Botia sidthimunki* Klausewitz, 1959, in which there are two dorsal stripes in front of dorsal fin and none behind; the stripes are interconnected by several transverse bars and by saddles over the back.

By its general body shape, *Botia nigrolineata* could be compared only to *B. lecontei* Fowler, 1937 from the Mekong basin in Laos and Thailand which has a deeper body (25–29, vs 23–24% SL in *B. nigrolineata*) and a colour pattern consisting of a black spot at posterior extremity of caudal peduncle (in adults).

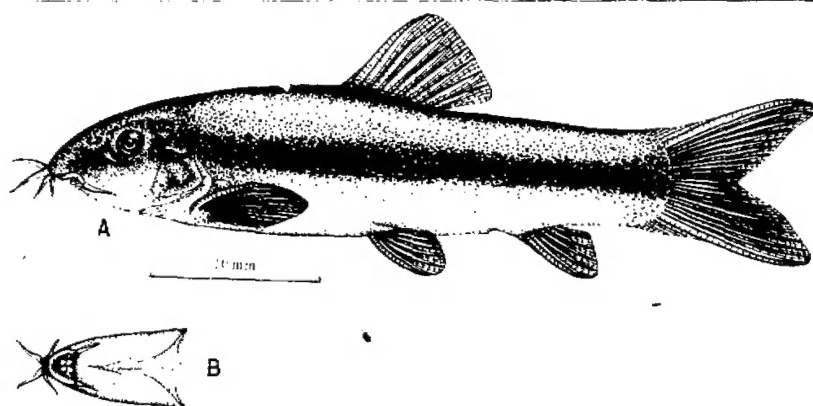


Fig. 3. *Botia nigrolineata* sp. nov., holotype, KIZ 735198,  
34.6 mm SL. A. Lateral view B. Mouth

#### Key to the species of *Botia* in the Lancangjiang

- 1.—Colour pattern consisting of a black stripe from tip of snout to mid-height of caudal fin base along lateral line and one from tip of snout to caudal fin along dorsal profile on a yellowish background..... *B. nigrolineata*
- Colour pattern consisting of dark brown to black bars on a greyish background, some longitudinal rows of spots may be present, sometimes forming thin stripes which end about below dorsal fin ..... 2
- 2.— 7—9 wide bars, not always very distinct, no black longitudinal rows, of spots or thin stripes ..... *B. superciliaris*
- 10—12 bars, sometimes irregularly shaped, about 10 rows of black horizontally elongated spots superimposed over the bars, beginning on head and ending about below dorsal fin, the anteriormost spots usually being fused to form very thin stripes, colour pattern may show great variation and parts of it may be lacking. .... *B. beauforti*

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**Appendix:** *Botia (Botia) rostrata* (Fig. 4), a new record for the Salween and Irrawaddy basins and for China.

In KIZ collections, there are two bottles of a species of *Botia (Botia)* not recorded by Chen (1980). It corresponds to Day's (1878) description and illustration of *B. geto* (Hamilton, 1822) which Hora (1932) described

as *B. dayi*. Menon (1974) considered *B. dayi* as a junior synonym of *B. rostrata* Günther, 1868. This is the first record of this species from China. According to distributional data of Jayaram (1981) it also is the first record for the Irrawaddy and Salween basins. We tentatively follow Menon's opinion, but considering the seemingly chaotic state of systematics of Indian botiine loaches, direct comparison with Indian material is necessary to confirm the present identification.

**Material:** KIZ 737003, 1 ex., 124.3 mm SL (a ripe female with distended abdomen); Yunnan, Salween basin, Nanka River in Ximeng County (22°45' N 90°30' E); KIZ 764248—9, 2 ex., 135.0—138.0 mm SL; Yunnan, Irrawaddy basin, Tuantian (24°40' N 98°40' E), in Tengchong County.

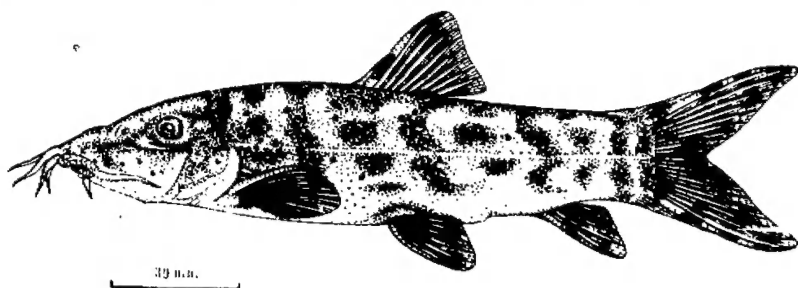


Fig. 4. *Botia rostrata* Günther, KIZ 764248, 135 mm SL

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## 澜沧江的沙鳅属鱼类

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通过最近的整理,澜沧江共有沙鳅属鱼类3种,它们是斑鳍沙鳅 *Botia beauforti* Smith、中华沙鳅 *B. superciliaris* Günther、黑线沙鳅(新种) *B. nigrolineata*。黑线沙鳅为新种,鉴别特征是沿背中和体侧有显著黑色纵条,起自头后止于尾鳍基。首次提出云南沙鳅 *Botia yunnanensis* Chen 可能是斑鳍沙鳅的次异名,中华沙鳅是在澜沧江的首次纪录。在附录中记录了突吻沙鳅 *B. rostrata* Günther,是国内首次纪录,也是萨尔温江和伊洛瓦底江水系的首次纪录。文中每个种均有插图,对新种作了详细的描述,对老种的有关名称作了釐订或讨论。

**关键词** 鳅科 沙鳅 新种 新纪录 中国

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